Experimental Validation of the Piezoelectric Triple Hybrid Actuation System (TriHYBAS)

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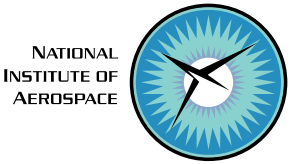
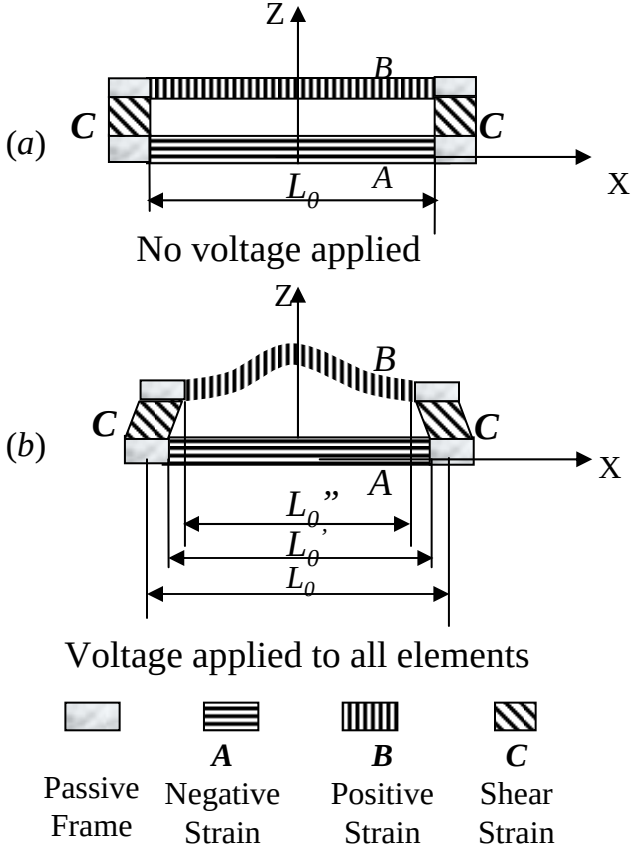
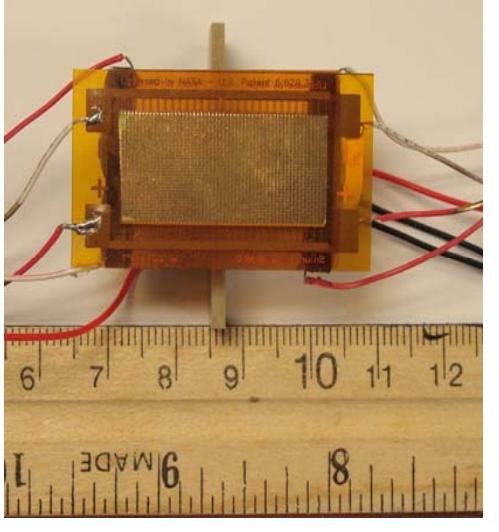
State College, PA

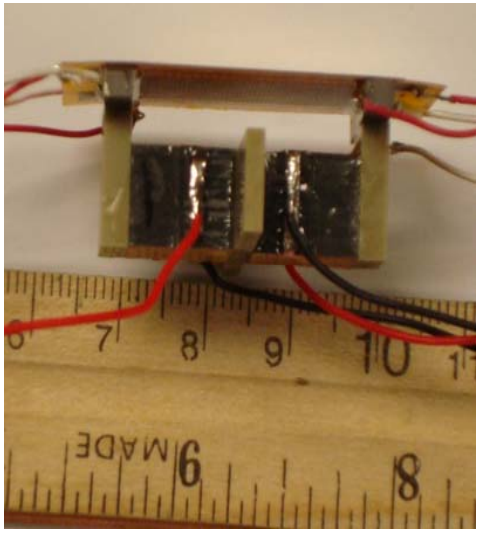


Piezoelectric Triple Hybrid Actuation System (TriHYBAS)





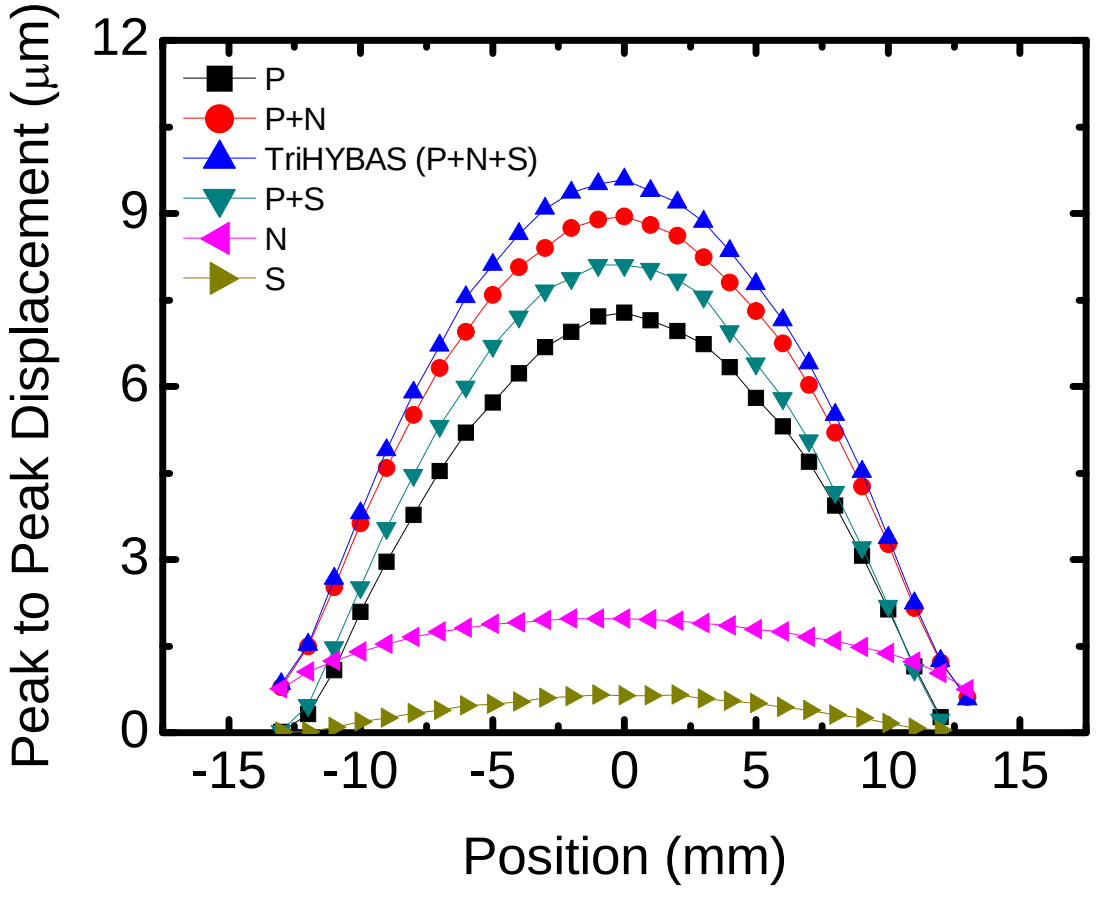
(a)



(b)

- JI Su, Tian-Bing Xu, Shujun, Zhang, Thomas Shrourt, and QiMing Zhang, "An Electroactive Polymer-ceramic Hybrid Actuator Systems for Enhanced Electromechanical Performance," ***Applied Physics Letters*** 85(6), pp. 1045-1047, 2004.
- Tian-Bing Xu, Xiaoning Jiang, and Ji Su, "High Performance Piezoelectric Triple Hybrid Actuation System (TriHYBAS)," NASA Case # LAR 17618-1

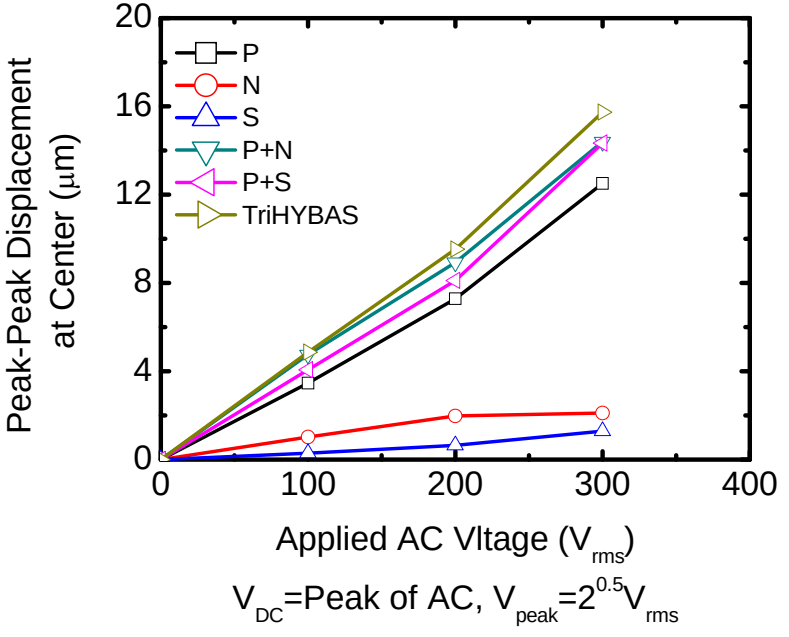
Displacement Profile of TriHYBAS



Applied Unipolar Voltage: 300 V DC bias and 200 Vrms AC at 1 Hz

Displacement Vs. Applied Voltage

Displacement at center of TriHYBAS



Displacement in length direction

for positive and negative components